

# what can I do to help?

Here are a few things you can do to keep Ontario's air clean and healthy:

- I If possible, do without your car. Bike, walk, take public transit. If you can't, car pool and keep your vehicle in top working order. And drive slower!
- I Buy energy-efficient appliances. Where it makes sense, choose a push mower over a gas-powered model, or a rake over a leaf blower.
- I Plant trees. They filter carbon dioxide and other pollutants out of the air, while producing fresh oxygen.
- I The air indoors can be five to ten times more polluted than the air outside your window. Be careful how you use volatile solvents, cleaners and pest sprays. Look for less toxic alternatives.
- I Get involved with a local school, business or environment group to work on clean air, green community or energy conservation projects.



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how are we doing?



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# we all have questions

For more than 20 years, the Ministry of Environment and Energy has worked with industry, municipalities, local groups and individuals to find the answers to our most crucial environmental questions. Together, we have celebrated some notable successes. And together we must face and overcome some difficult challenges.

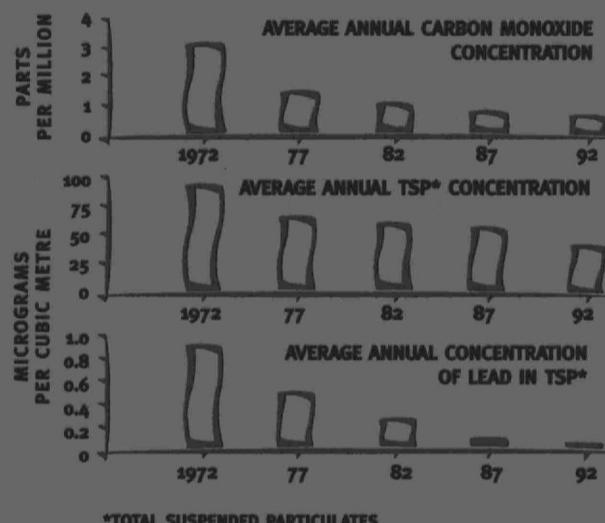
Ensuring Ontario's air is clean and healthy means everyone has a role to play. The ministry sets standards and monitors air quality across the province. We have forged innovative partnerships with the private sector to voluntarily cut emissions. We approve and oversee pollution abatement efforts, and we enforce the environmental laws of Ontario. This brochure describes how we are doing and what still

## what is air pollution?

Air pollution is any gas, dust or vapour released into the air that can interfere with human health or the environment. Pollutants can spread hundreds of kilometres through the air, recombining into new and more dangerous compounds before they reach the ground. Air pollution can seriously threaten human health, damage crops and trees, erode stonework and painted surfaces, and produce foul odours and dirty haze. Pollution can also disrupt the natural systems that control climate, distribute heat and water, and regulate the global ecosystem. It can even attack the delicate ozone layer that shields us from the sun's more dangerous rays.

## are things getting better? Or worse?

Much better. We've monitored air pollution since the early 1970s and our records show that Ontario's air is as clean or cleaner than the air in the United States, Europe and other industrialized regions. Most of the common air pollutants have declined significantly over the last 20 years. Cars, factories and furnaces run cleaner than ever before. Our air pollution control programs and policies have also reaped tremendous environmental benefits. Since 1971, carbon monoxide is down by 79 per cent, particulates have decreased by 60 per cent, and lead emissions from cars have been cut by 99 per cent.



## is it safe to breathe the air?

Yes. We've set up an extensive air monitoring system across the province to track air quality and warn of any impending problems. When measurements of ground-level ozone (smog), dust or other pollutants begin to rise, we issue health advisories and can order local industry to cut back or even shut down their operations. Fortunately, we've only had to do that a handful of times in the 1990s, and just once in 1993. What is the most common air problem we deal with? Complaints about offensive odours.



## where is Ontario's air pollution coming from?

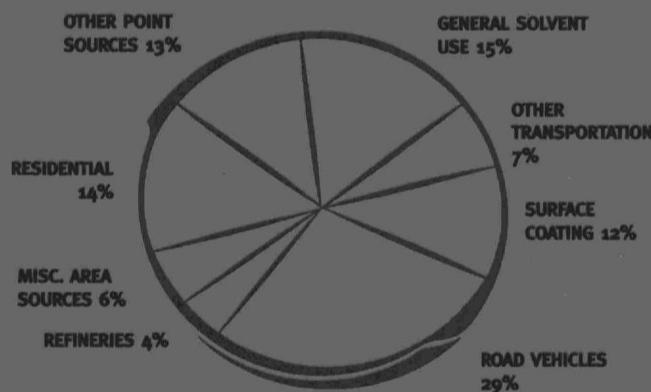
The pollutants found in Ontario's air come from industrial smokestacks and power plants, automobile and truck tailpipes, some of the products you buy, the landfills that hold your garbage, and the furnaces

used to heat your homes, schools and businesses. There are a few large sources and millions of smaller ones, each subject to federal and provincial pollution standards and controls. However, lasting solutions to some of our air pollution problems will require international co-operation. Ozone, acid rain and other pollutants easily blow across our borders. More than half the smog in Ontario comes from sources in the United States.

## what are we doing to cut pollution?

Pollution prevention is the most efficient way to keep air pollutants out of the environment. Instead of expensive pollution control equipment, many companies are looking at innovative process changes to avoid producing pollution in the first place. Seven industry sectors have accepted Ontario's pollution prevention challenge and are working voluntarily to reduce annual emissions. We anticipate a reduction of 75,000 tonnes of nitrogen oxides (NOx) and volatile organic compounds (VOCs) from these sectors by the year 2005. Ontario Hydro has also committed to reduce NOx emissions by 40 per cent (of 1985 levels) by the year 2000. And the Canadian Chemical Producers' Association has also pledged to chop NOx by 22 per cent and VOCs by 30 per cent (based on 1992 levels) by 1997.

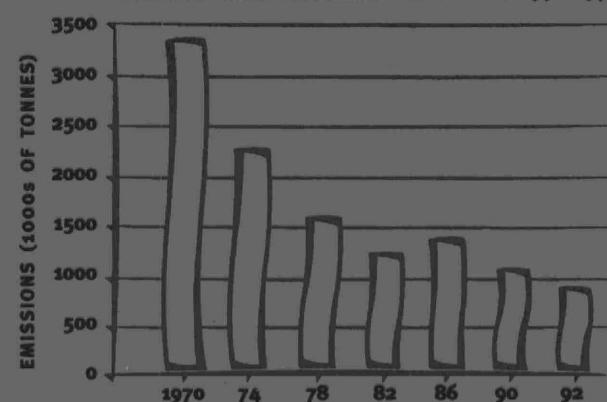
### SOURCES OF VOLATILE ORGANIC COMPOUNDS (VOC) RELEASED INTO THE AIR



## is acid rain killing my lake?

Decades of acid rain have damaged thousands of sensitive lakes across the province. Since strict air pollution controls were put in place, there is good evidence that some of these lakes are beginning to recover. Acidity has dropped and aquatic life is starting to come back. Since 1971, emissions of sulphur dioxide, one of the primary causes of acid rain, have been cut by more than 80 per cent thanks, in part, to clean up efforts by Ontario's smelters, power plants and refineries, as well as the switch to low-sulphur fuels and cleaner technologies.

### SULPHUR DIOXIDE EMISSIONS IN ONTARIO 1970-1992



## what about the shrinking ozone layer?

It's true that the fragile ozone layer, which shields us from the sun's harmful rays, is under attack by fluorocarbons and halons. In response, Ontario has enacted regulations to control the production and use of these harmful substances in aerosol cans, air conditioners, refrigerators, fire extinguishers, cleaning solvents and for the sterilization of medical instruments. For example, it's now against the law to vent fluorocarbon refrigerant into the air. Leaking air conditioners and refrigerators also have to be fixed by a certified technician. The regulations cover over 98 per cent of the ozone-destroying substances used in Ontario.

## are "greenhouse gases" changing our climate?

Like glass in a greenhouse, gases such as carbon dioxide and methane trap heat in the lower atmosphere causing temperatures to increase. Since the burning of fossil fuels is the primary source of these gases, Ontario is promoting energy efficiency and the switch to cleaner energy sources. And we are making progress. Ontario's carbon dioxide emissions per person are below the national average and, as of 1993, have decreased by 30 per cent from their peak in 1979.

## what are the challenges for the future?

Some serious air problems remain. During Ontario's hot summer months, volatile organic compounds (or VOCs) combine with nitrogen oxides (NOx) to make the smog that sometimes chokes our cities and damages our crops. In response, we have introduced a number of regulations and co-operative programs to keep the VOCs from solvents, gasoline fumes and other sources out of the air. For example, we are working with dry cleaners and bulk gas depots to reduce emissions. And we have set up a test clinic in Toronto where drivers, voluntarily and at no charge, can have the pollution control equipment on their cars and trucks checked.